
**2011 Report on the
Funding of Defined Benefit Pension Plans in Ontario**

Eighth Annual Report

*Overview and Selected Findings
2008-2011*

Financial Services Commission of Ontario

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2011 Report on the Funding of Defined Benefit Pension Plans in Ontario Eighth Annual Report

Overview and Selected Findings 2008-2011

1.0 INTRODUCTION

The Financial Services Commission of Ontario (FSCO) is an agency of the Ministry of Finance that regulates Ontario registered pension plans in accordance with the Pension Benefits Act (PBA) and Regulation 909, as amended (Regulation).

FSCO has prepared this report to provide pension stakeholders with up-to-date funding, investing and actuarial information related to defined benefit (DB) pension plans in Ontario. The information is presented on an across-the-board basis only. It is based on the latest filed funding valuation reports for DB pension plans that had valuation dates between July 1, 2008 and June 30, 2011, and financial statements for the fiscal year ending between July 1, 2010 and June 30, 2011.

1.1 Risk-Based Monitoring

In July 2000, FSCO implemented a risk-based approach to monitor the funding of DB pension plans.¹ This approach involves the collection of key actuarial and financial data from funding valuation reports filed with FSCO, using a standard form called the Actuarial Information Summary (AIS).² The collected data are entered into a database, and a selective risk-based review system is used to assist staff in identifying individual funding reports for detailed compliance reviews.

In 2006, to broaden the risk-based approach to monitoring DB pension plans, FSCO implemented a risk-based monitoring of pension fund investments.³ This program involves the collection of key financial and investment data for DB plans on an annual basis, using a standard form called the Investment Information Summary (IIS). The collected data are entered into a database, and a selective risk-based review system identifies plans with potential investment concerns for further review. The annual monitoring cycle covers plans whose plan fiscal year

¹ Risk-based Supervision of the Funding of Ongoing Defined Benefit Pension Plans (May 2000), an overview of the risk-based approach, is available at: <http://www.fSCO.gov.on.ca/en/pensions/Documents/riskbasedsupervision.pdf>

² The AIS is a standardized form, developed jointly by FSCO, the Canada Revenue Agency, the federal Office of the Superintendent of Financial Institutions, and the Régie des rentes du Québec. It is prepared by an actuary and filed with FSCO in conjunction with a funding valuation report.

³ Further information on the risk-based approach for monitoring pension fund investments is available at: http://www.fSCO.gov.on.ca/en/pensions/investment/Pages/risk_based_imm.aspx

end date is between July 1 of one year and June 30 of the next. Over 90% of the plans have a plan fiscal year end date of December 31.

In 2009, FSCO initiated a project called the Enhanced Risk-Based Regulation Project (RBR Project) to develop and implement a more comprehensive approach to risk-based regulation of Ontario registered pension plans. After considering the pension plan environment in Ontario, its current regulatory activities, as well as the experience and practices of other pension regulators who have adopted a risk-based approach to pension supervision, FSCO developed a proposed risk-based regulation framework.

A consultation paper describing the proposed framework was posted on FSCO's website on March 7, 2011. Overall, the respondents who made submissions were strongly supportive of FSCO's move to enhance its risk-based approach to regulation. The final Risk-Based Regulation Framework document was posted on FSCO's website in November 2011.⁴

FSCO's risk-based regulation framework considers a broad range of pension plan risks including those related to funding, investment, administration, governance and sponsor-related risks. In addition, it applies a more integrated approach towards assessing pension plan risks than the current risk-based monitoring processes. The final Risk-Based Regulation Framework document sets out an implementation strategy with a goal of transitioning to the new framework over the next several years. During transition, the principal activities include:

- Enhancing the existing risk-based monitoring processes by integrating the monitoring and review of funding and investment risks;
- Establishing risk-based processes for monitoring administration, governance and plan sponsor risks;
- Enhancing stakeholders' understanding of FSCO's risk-based approach through ongoing engagement, which includes education and communication; and
- Establishing quality control and maintenance processes that include the oversight and update of the risk-based methodology and application.

1.2 Funding Relief Measures

On August 24, 2007, Ontario introduced changes to the Regulation affecting the funding rules for multi-employer pension plans (MEPPs). The Regulation provides temporary funding relief for Specified Ontario Multi-Employer Pension Plans (SOMEPPs) that filed reports with valuation dates on or after September 1, 2007 and before September 1, 2010 (subsequently extended to September 1, 2012). A SOMEPP is exempt from the requirement to fund on a solvency basis.

On June 23, 2009, the Regulation was further amended to provide temporary solvency funding relief for other Ontario registered DB pension plans. The temporary solvency funding relief measures are limited to eligible plans, and are effective with the first filed valuation report with a valuation date on or after September 30, 2008 and before September 30, 2011 (solvency relief report). These measures provide for the deferral of special payments for new going concern and

⁴ FSCO's final Risk-Based Regulation Framework document is available at:
http://www.fSCO.gov.on.ca/en/pensions/fSCO_consultations/Documents/Framework_Final.pdf

solvency deficiencies for up to 12 months, consolidation of previously determined solvency special payments, and amortization of new solvency deficiencies over 10 years instead of 5 years, with member consent.

This report contains summary statistics relating to the use of these relief measures.

1.3 DB Pension Plan Reporting

The AIS and IIS databases provide FSCO with the information it needs to compile relevant pension plan funding and investment data, and identify certain DB pension plan trends in Ontario. This is FSCO's 2011 Report, its eighth annual report on the funding and investment of DB pension plans in Ontario.

Key Findings

The 2011 Report's key findings are listed below:

Funding Data

- Overall, the funded position of pension plans has deteriorated from what was reported in the Seventh Annual Report on the Funding of Defined Benefit Pension Plans in Ontario (the 2010 Report).⁵ In particular:
 - the *median* funded ratio on a *going concern* basis has decreased from 102% to 99%, and
 - the *median* funded ratio on a *solvency* basis has decreased from 86% to 85%.
- Compared to the 2010 Report, more plans were less than fully funded on either a going concern or solvency basis, or both, at their last valuation date. Specifically:
 - 52% of the plans were less than fully funded on a going concern basis (versus 45% in the 2010 Report), and
 - 88% of the plans were less than fully funded on a solvency basis (versus 84% in the 2010 Report).
- Assumptions and methods for the going concern valuations continue to be quite uniform when compared to prior valuations. For example:
 - Over 99% of the plans used the unit credit cost method (either with or without salary projections).
 - Over 99% of the plans used either a market or smoothed market value of assets (approximately two-thirds used a market value and one-third used a smoothed market value).
 - The average interest rate assumption used for going concern valuations decreased from 6.16% to 5.79% over the 2007 to 2010 valuation period, and 83.7% of the 2010 valuations used an interest rate below 6.5%.

⁵ FSCO's Seventh Annual Report on the Funding of Defined Benefit Pension Plans in Ontario is available at: <http://www.fSCO.gov.on.ca/en/pensions/Documents/DBFundRep11.pdf>

- For the 2010 valuations, all of the plans used a mortality table with a base year of 1994 or later.
- The minimum required contributions for 2011— including employer normal cost, member required contributions and special payments — are estimated to remain relatively flat at \$8.0 billion, compared to the \$8.1 billion estimated for 2010 in the 2010 Report.

Funding Relief Data

- The statistics on the utilization of the temporary funding relief measures as of December 31, 2011 are as follows:
 - Of the 70 MEPPs that contain a defined benefit provision, 45 plans (64%) have elected to be treated as a SOMEPP. These 45 MEPPs represents 94% of the total plan membership covered by the 70 MEPPs.
 - Of the 1,438 DB pension plans that are included in this report, 1,389 plans are eligible to elect the temporary solvency funding relief that was introduced on June 23, 2009.⁶ Of the eligible plans, 398 plans (29%) have elected to use one or more of the funding relief options and have filed a solvency relief report supporting their elections.

Investment Data

- The typical asset mix of pension funds changed from a fixed income/non-fixed income split of 43%/57% in 2009 to a split of 41%/59% in 2010.
- As in the 2010 Report, MEPPs generally invested more of their pension funds in non-fixed income assets than did single employer pension plans (SEPPs).
- There do not seem to be significant differences in asset mix, average return and average investment fees between plans of different benefit types.
- As expected, higher investment fees are paid by small plans and plans that mainly invest in pooled funds.

⁶ The difference of 49 plans (1,438 – 1,389) is comprised of SOMEPPs and plans covered under special regulations that are not eligible to elect the temporary solvency funding relief options.

Projected Solvency Position as of December 31, 2011

- During 2011, the solvency funded position of pension plans is expected to deteriorate significantly due to poor investment returns (estimated to be 1.0%) and a decline in long term interest rates. The funded position is further reduced by the requirement to use a more conservative mortality assumption for determining solvency liabilities. Overall, the *median* solvency ratio⁷ for pension plans is projected to decrease from 87 % at the end of 2010 to 72% at the end of 2011.

⁷ A plan's solvency ratio is the ratio of the market value of the plan's assets to the plan's solvency liabilities.

2.0 FUNDING DATA ANALYSIS

This section provides an analysis and summary of the funding data, including actuarial assumptions and methods, for DB pension plans with valuation dates between July 1, 2008 and June 30, 2011. The data were compiled from the AIS and funding valuation reports received by FSCO on or before the data cutoff date, December 31, 2011.

Generally, funding valuation reports must be filed once every three years on both a going concern and solvency basis. However, if solvency concerns are indicated,⁸ annual filing is required until solvency concerns no longer exist. Early filings may also be required when events such as plan mergers, partial windups, or sales of businesses occur. To avoid double counting, this report only considers data from a plan's most recently filed report.

For the purposes of this report, the following plans are excluded:

- designated plans,
- plans where members are no longer accruing future DB or defined contribution (DC) benefits (referred to as Frozen Plans), and
- seven large public sector plans to ensure that the results of our analysis are not skewed.

The funding data analysis included a total of 1,438 plans. Table 2.1 below presents a profile of these plans. For additional details on the plans that were analyzed, see section 8.0 of this report.

Table 2.1 - Summary of Included Plans

Plan/ Benefit Type	# of Plans	Active Members	Retired Members	Other Participants	Total Participants	Market Value of Assets (\$ Millions)
Final Average	491	176,122	110,331	48,084	334,537	52,771
Career Average	152	27,250	16,341	9,695	53,286	3,337
Flat Benefit	234	67,573	105,127	30,512	203,212	26,241
Hybrid	381	148,928	140,430	74,914	364,272	38,851
Frozen Hybrid ⁹	110	22,202	23,203	9,637	55,042	3,414
MEPP	70	351,195	101,019	366,041	818,255	19,246
Total	1,438	793,270	496,451	538,883	1,828,604	143,860
Average Age		48.6	69.2	47.4		

⁸ A report indicates solvency concerns if the employer has elected to exclude plant closure or permanent layoff benefits from the calculation of solvency liabilities, or in any of the following circumstances: (a) the solvency ratio was less than 80% if the valuation date is before December 31, 2012, and less than 85% if the valuation date is on or after December 31, 2012, or (b) where the solvency liabilities exceeds the market value of assets by more than \$5 million, the solvency ratio was less than 90% if the valuation date is before December 31, 2010 and less than 85% if the valuation date is on or after December 31, 2010.

⁹ Plans in which members have a frozen DB entitlement, but accrue DC benefits for future service.

Table 2.2 below summarizes the profiles of the 156 Frozen DB Plans and seven large public sector plans that were excluded from the funding data analysis. In addition, 110 plans that have wound up or are in the process of winding up have been excluded from the funding data analysis.

Table 2.2 - Summary of Excluded Plans

Plan Type	Plan Sub-Type	# of Plans	Active Members	Retired Members	Other Participants	Total Participants	Market Value Of Assets (\$ Millions)
Public Sector Pension Plans	Large Public Sector	7	726,957	379,999	141,829	1,248,785	236,403
	Average Age		44.7	70.6	53.3		
Frozen DB Plans	No Future DB/DC accruals	156	7,303	24,250	11,802	43,355	4,077
	Average Age		45.4	75.2	52.1		

2.1 Summary of Funding Data

In total on a going concern basis, of the 1,438 plans that were analyzed, 752 plans (52%) were less than fully funded. Overall, these 1,438 plans covered 1,828,604 plan members, of which 1,182,681 (65%) were members of the 752 plans that were not fully funded.

In total on a solvency basis, 1,264 plans (88%) were less than fully funded and covered 1,690,307 plan members (92% of total members).

Tables 2.3 and 2.4 show the distribution of underfunded plans by plan/benefit type and by membership.

Table 2.3 - Distribution of Underfunded Plans on a Going Concern Basis

Plan/Benefit Type	By Plan		By Membership	
	Number of Plans	% of Total Plans by Plan/Benefit Type	Number of Members	% of Total Membership by Plan/Benefit Type
Final Average	300	61%	197,778	59%
Career Average	68	45%	15,251	29%
Flat Benefit	83	35%	99,728	49%
Hybrid	206	54%	170,953	47%
Frozen Hybrid	61	55%	43,342	79%
MEPP	34	49%	655,629	80%
Total	752	52%	1,182,681	65%

Table 2.4 - Distribution of Underfunded Plans on a Solvency Basis

Plan/Benefit Type	By Plan		By Membership	
	Number of Plans	% of Total Plans by Plan/Benefit Type	Number of Members	% of Total Membership by Plan/Benefit Type
Final Average	407	83%	295,826	88%
Career Average	142	93%	52,836	99%
Flat Benefit	224	96%	200,338	99%
Hybrid	336	88%	289,712	80%
Frozen Hybrid	93	85%	51,140	93%
MEPP	62	89%	800,455	98%
Total	1,264	88%	1,690,307	92%

Table 2.5 provides summary information grouped by plan maturity (which is measured by the proportion of solvency liabilities relating to pensioners).

Table 2.5 – Funding Information Grouped By Maturity

Proportion of Solvency Liabilities relating to Pensioners	Number of Plans	Total Membership	Solvency Assets (\$ Millions)	Solvency Liabilities (\$ Millions)	Ratio of Solvency Assets to Solvency Liabilities	Ratio of Active Members to Pensioners
Less than 25%	331	237,541	8,930	10,513	85%	6.9 : 1
25% ≤ ratio < 50%	654	1,064,862	62,203	75,360	83%	2.6 : 1
50% ≤ ratio < 75%	353	371,886	47,737	54,939	87%	0.7 : 1
75% and over	100	154,315	24,421	29,541	83%	0.2 : 1
Total	1,438	1,828,604	143,292	170,354	84%	1.6 : 1

Tables 2.6 and 2.7 below provide a more detailed breakdown of the going concern and solvency funded ratios in respect of different types of DB pension plans.

For all plans that were analyzed, the *median* funded ratios were 99% on a going concern basis and 85% on a solvency basis. Also note that 38 (54%) of the 70 MEPPs had a solvency ratio of less than 80%. These 38 plans have approximately 708,300 active and former members, which represent approximately 87% of the total MEPP membership.

Table 2.6 - Going Concern Funded Ratio

Funded Ratio (FR)	Final Average	Career Average	Flat Benefit	Hybrid	Frozen Hybrid	MEPP	All Plans
FR < 0.60	4	1	-	1	1	-	7
0.60 ≤ FR < 0.80	34	3	5	18	12	3	75
0.80 ≤ FR < 0.90	106	10	22	68	16	9	231
0.90 ≤ FR < 1.00	156	54	56	119	32	22	439
1.00 ≤ FR < 1.20	162	68	111	143	37	31	552
FR ≥ 1.20	29	16	40	32	12	5	134
Total	491	152	234	381	110	70	1,438
Median Ratio	0.96	1.01	1.04	0.98	1.00	1.00	0.99

Table 2.7 - Solvency Funded Ratio

Solvency Ratio (SR)	Final Average	Career Average	Flat Benefit	Hybrid	Frozen Hybrid	MEPP	All Plans
SR < 0.60	5	3	1	1	3	5	18
0.60 ≤ SR < 0.80	98	32	74	83	26	33	346
0.80 ≤ SR < 0.90	202	82	114	168	40	15	621
0.90 ≤ SR < 1.00	102	25	35	84	24	9	279
1.00 ≤ SR < 1.20	64	7	10	31	12	6	130
SR ≥ 1.20	20	3	-	14	5	2	44
Total	491	152	234	381	110	70	1,438
Median Ratio	0.86	0.84	0.83	0.86	0.86	0.78	0.85

2.2 Summary of Actuarial Assumptions and Methods

The key actuarial assumptions and methods used in going concern valuations are outlined below:

- Over 99% of the plans used the unit credit cost method (with salary projections for final average plans and hybrid plans with final average benefits) to calculate their going concern liabilities.

Table 2.8 - Liability Valuation Method

Liability Valuation Method	# of Plans	% of Plans
Unit Credit (with salary projection)	942	65.5%
Unit Credit (with no salary projection)	484	33.7%
Entry Age Normal	7	0.5%
Aggregate	3	0.2%
Other	2	0.1%
Total	1,438	100.0%

- Assets were most frequently valued using a market or market-related approach, with over 99% of the plans using either a market or smoothed market value (approximately two-thirds used a market value and one-third used a smoothed market value).

Table 2.9 - Asset Valuation Method

Asset Valuation Method	# of Plans	% of Plans
Market	942	65.5%
Smoothed Market	488	33.9%
Book	4	0.3%
Book & Market Combined	3	0.2%
Other	1	0.1%
Total	1,438	100.0%

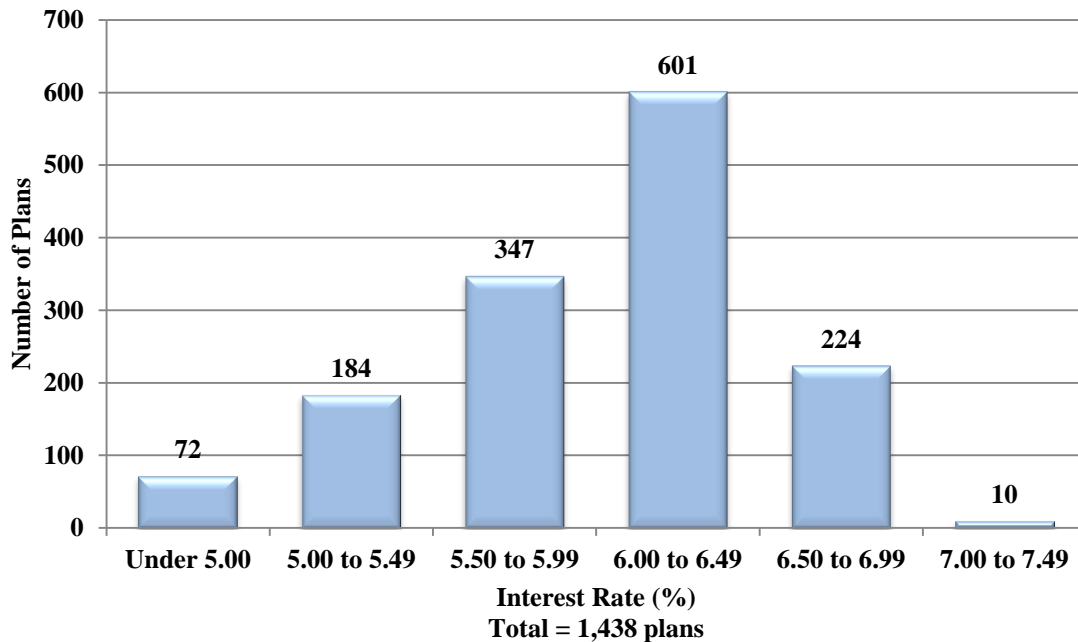
- For going concern valuations, all plans used a mortality table with a base year of 1994 or later.¹⁰

Table 2.10 - Mortality Assumption

Mortality Assumption	# of Plans	% of Plans
1994 GAM Static	13	0.9%
1994 GAR	12	0.8%
1994 UP	1,327	92.3%
Other ¹¹	86	6.0%
Total	1,438	100.0%

- Interest rate assumptions used to value the going concern liabilities were generally lower than in prior years, with approximately 97% of plans using a rate at or below 6.50%. Rates continued to fall within a relatively narrow range, with 79% of the plans using a rate between 5.5% and 6.5% inclusive.¹²

Chart 2.11 - Going Concern Interest Assumption



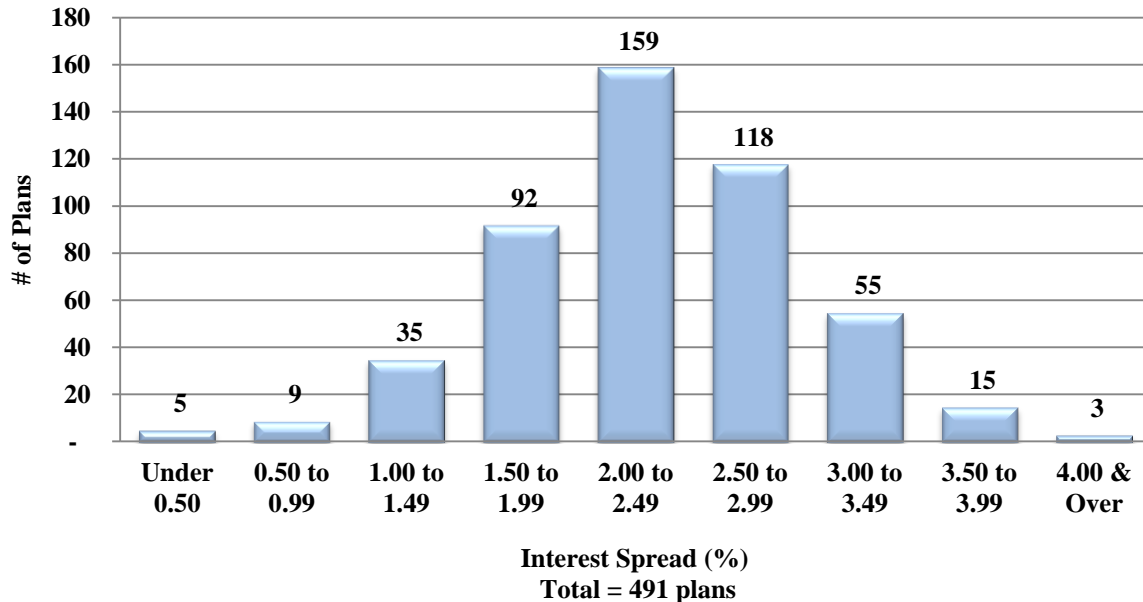
¹⁰ Also see the commentary on mortality assumptions that accompanies Table 4.6 in this report.

¹¹ Of these 86 plans, 43 plans used a variation of the 1994 UP table (e.g., age setback, specified percentage of the standard rates, etc.), 32 plans used the RP2000 table or a variation of it, 5 plans used a variation of the 1994 GAR table, 5 plans used a variation of the 1995 Buck Mortality table, and 1 plan used a variation of the 1994 GAM Static table.

¹² Of the 224 plans that used a going concern interest rate assumption in the range of 6.50% to 6.99%, 191 plans used an interest rate of 6.50%.

- For final average earnings plans, the difference between the interest assumption and the salary increase assumption used in going concern valuations typically fell within a range of 1.5% to 3.0% inclusive. This accounts for 84% of all plans providing final average benefits.¹³ The average spread between the interest assumption and the salary increase assumption was 2.19%.

Chart 2.12 - Interest Salary Differential for Final Average Plans



- Table 2.13 shows the total wind up expense allowance made in solvency valuations by plan membership size, including active members, former members and other plan beneficiaries.¹⁴ The expense allowance is also expressed in average dollar amounts per plan and per plan member. The average expense allowance per member generally decreases as plan membership size increases. The reverse pattern appears for plans with 10,000 or more members. Since there are only a small number of plans in the last two size categories (i.e., more than 5,000 members), greater caution should be exercised when interpreting the results for plans of this size.

The average per member wind up expense allowances are generally comparable to those previously reported in the 2010 Report, with a 2.0% - 6.0% increase for plans with less than 10,000 plan members.

¹³ Of the 55 final average plans with an interest-salary differential in the range of 3.00% to 3.49%, 43 plans had an interest-salary differential of 3.00%.

¹⁴ For confidentiality reasons, the two plans with more than 50,000 members and other beneficiaries were excluded from this analysis.

Table 2.13 - Provision for Wind Up Expenses

Plan Membership	Total Plans	Total Membership	Wind Up Expenses		
			Total WU Expenses	Average Per Plan	Average Per Member
<100	463	22,240	\$ 23,195,850	\$ 50,099	\$ 1,043
100-499	542	133,050	64,952,740	119,839	488
500-999	161	115,310	39,327,425	244,270	341
1,000-4,999	197	401,537	94,702,000	480,721	236
5,000-9,999	35	240,002	45,504,000	1,300,114	190
10,000-49,999	24	438,260	151,973,000	6,332,208	347
All Plans	1,422	1,350,399	\$ 419,655,015	\$ 295,116	\$ 311

3.0 TEMPORARY FUNDING RELIEF

This section provides summary membership and funding statistics, as well as the impact on funding costs for plans that utilized the temporary funding relief measures available under the PBA and Regulation.

3.1 Specified Ontario Multi-Employer Pension Plans (SOMEPPs)

For a MEPP that elects to be treated as a SOMEPP, the contributions to the plan must not be less than the sum of the normal cost, the special payments for any previously established going concern unfunded liability, and the special payments for any new going concern unfunded liability determined in the valuation report. Any new going concern unfunded liability must be liquidated over a period of 12 years instead of the usual 15 years. Furthermore, there are limitations on benefit improvements, requiring amortization over eight years under prescribed conditions. There is no requirement to fund on a solvency basis during this period, although solvency valuations are still required to be performed and their results must be set out in the valuation report.¹⁵

The following tables provide selected statistics on the MEPPs that contain a defined benefit provision. Up to December 31, 2011, 45 of the 70 MEPPs have elected to become SOMEPPs.

Table 3.1 - Membership Information

	# of Plans	Total (Median) Membership Count			
		Active Members	Retired Members	Other Participants	Total
SOMEPPs	45	327,106 (1,266)	88,208 (814)	354,489 (1,360)	769,803 (3,879)
Non-SOMEPPs	25	24,089 (615)	12,811 (234)	11,552 (268)	48,452 (827)
Total (All MEPPs)	70	351,195 (919)	101,019 (446)	366,041 (706)	818,255 (2,263)

Table 3.2 - Funding Information

	Total (Median) Value			
	Market Value of Assets	Solvency Assets ‡	Solvency Liabilities	Ratio of Solvency Assets to Solvency Liabilities
	(\$ Millions)			
SOMEPPs	15,401 (106.4)	15,201 (105.6)	23,908 (148.5)	63.6% (72.6%)
Non-SOMEPPs	3,846 (64.8)	3,834 (64.6)	4,045 (77.4)	94.8% (90.0%)
Total (All MEPPs)	19,247 (92.3)	19,035 (91.9)	27,953 (115.2)	68.1% (77.9%)

‡ Market value of assets less provision for wind up expenses

¹⁵ More information on SOMEPPs is available at:
<http://www.fsco.gov.on.ca/en/pensions/actuarial/Pages/MEPPsolvency-qanda.aspx>

The plans that elected to become SOMEPPs tend to be significantly larger than non-SOMEPPs, when measured by the size of their assets, liabilities and plan membership. For example, the *median* size of solvency liabilities for SOMEPPs is approximately 92% larger than that for non-SOMEPPs.

In terms of funding levels, SOMEPPs are significantly less well funded than non-SOMEPPs. The *median* solvency ratio for SOMEPPs is 72.6% compared to 90.0% for non-SOMEPPs.

3.2 2009 Funding Relief

Effective June 23, 2009 and for a temporary period, the administrator of a plan that meets certain criteria may choose one or more of the following three funding relief options in the first filed valuation report with a valuation date on or after September 30, 2008 and before September 30, 2011 (referred to as the solvency relief report).¹⁶

Option 1 - Defer, up to one year, the start of special payments required to liquidate any new going concern unfunded liability or new solvency deficiency determined in the solvency relief report.

Option 2 - Consolidate special payments for pre-existing solvency deficiencies into a new five-year payment schedule that starts on the valuation date of the solvency relief report.

Option 3 - With the consent of active and former members, extend the period for liquidating the new solvency deficiency from five years to a maximum of 10 years.

Among the 1,438 DB pension plans that are included in this report, 1,389 plans are eligible to elect the temporary solvency funding relief that was introduced on June 23, 2009. The remaining 49 plans— which include SOMEPPs and plans covered under special regulations — are not eligible.

Of the 1,389 eligible plans, 398 plans (29%) elected to use one or more of the funding relief options (Electing Plans) and have filed a solvency relief report in support of their elections.¹⁷

Table 3.3 below presents a profile of the Electing and Non-Electing Plans as at December 31, 2011.

¹⁶ More information on temporary solvency funding measures is available at: <http://www.fsco.gov.on.ca/en/pensions/actuarial/Pages/solvency.aspx>

¹⁷ An additional 35 plans elected to use one or more of the funding relief options for a total of 433 plans (398+35). However, they have been excluded from the total because they have wound up, are in the process of winding up (11 plans), or are Frozen DB plans (24 plans).

Since the 2010 Report was published, an adjustment has been made in determining which plans are included in the funding relief analysis. The analysis now excludes pension plans that, as of December 31, 2011:

- have been wound up or are in the process of winding up;
- have changed their registration to another jurisdiction;
- are not eligible to elect solvency relief (e.g., SOMEPPs, plans covered under special regulations); or
- are one of the seven large public sector plans that are excluded from this report.

Table 3.3 - Membership Information*

	# of Plans	Total (Median) Membership Count			
		Active Members	Retired Members	Other Participants	Total
Electing Plans	398	164,706 (107)	166,946 (65)	54,374 (37)	386,026 (209)
Non-Electing Plans	991	319,527 (73)	217,777 (46)	127,766 (33)	665,070 (152)
Total (All Plans)	1,389	484,233 (86)	384,723 (57)	182,140 (36)	1,051,096 (179)

* Based on the solvency relief report

Table 3.4 - Funding Information*

	# of Plans	Total (Median) Value		
		Solvency Assets	Solvency Liabilities	Ratio of Solvency Assets to Solvency Liabilities
		(\$ Millions)		
Electing Plans	398	38,342 (15)	54,349 (20)	70.5% (75.0%)
Non-Electing Plans	991	74,990 (12)	83,533 (14)	89.8% (86.6%)
Total	1,389	113,332 (14)	137,882 (17)	82.2% (80.3%)

* Based on the solvency relief report

Electing Plans tend to be larger than Non-Electing plans, when measured by the size of their assets, liabilities and plan membership. For example, the *median* size of solvency liabilities in respect of Electing Plans is approximately 43% larger than that of Non-Electing Plans.

In terms of funding levels, Electing Plans are generally less well funded than Non-Electing Plans. The *median* solvency ratio for the Electing Plans is 75.0% compared to 86.6% for Non-Electing Plans.

Table 3.5 shows the distribution of options chosen by Electing Plans. As shown below, the combined use of options 1 and 2 was the most prevalent choice, accounting for 47.8% of all plan elections. The next most common choice was option 1, which accounted for 28.1% of plan elections, followed by all options at 8.8% and option 2 at 7.5% of Electing Plans.

Table 3.5 - Distribution of Funding Relief Options

Election	Number of Plans	% of Plans
Option 1 only	112	28.1%
Option 2 only	30	7.5%
Option 3 only	8	2.0%
Options 1 and 2	190	47.8%
Options 1 and 3	20	5.0%
Options 2 and 3	3	0.8%
All Options	35	8.8%
Total	398	100.0%

To assess the cash funding implications of these relief measures, a comparison was made between the minimum levels of required contributions before and after the application of funding relief, for the 12-month period following the valuation date of the solvency relief reports filed by Electing Plans. As shown in Table 3.6, the required funding contributions for Electing Plans were reduced significantly. Specifically, their minimum required contributions were reduced from \$3,798 million to \$1,874 million — a reduction of \$1,924 million or 51 per cent. The bulk of the reduction (94%) was attributable to the lower solvency special payments.

Table 3.6 - Required Contributions in the 12-month Period Commencing on the Valuation Date of the Solvency Relief Report for the 398 Electing Plans

Required Contributions	Before	After	Reduction in Required Contributions
	Application of Funding Relief	Application of Funding Relief	
	(\$ Millions)		
Employer Normal Cost	666	666	0
Going Concern Special Payments	743	620	123
Solvency Special Payments	2,389	588	1,801
Total Minimum Required Contributions	3,798	1,874	1,924

4.0 TRENDS ANALYSIS

The following trends analysis incorporates data from all filed reports with valuation dates between July 1, 2007 and June 30, 2011.

4.1 Solvency Funded Status

Table 4.1 shows a breakdown of plans by solvency ratios for the following valuation years:¹⁸

- 2007 valuation year: July 1, 2007 to June 30, 2008
- 2008 valuation year: July 1, 2008 to June 30, 2009
- 2009 valuation year: July 1, 2009 to June 30, 2010
- 2010 valuation year: July 1, 2010 to June 30, 2011

The majority of plans have a valuation date of either December 31 or January 1. Plans that have solvency concerns are required to file valuation reports annually. Therefore, they would appear in FSCO's database for more than one valuation year.

Table 4.1 - Solvency Ratios by Valuation Year

Solvency Ratio (SR)	2007		2008		2009		2010	
	# of Plans	% of Plans	# of Plans	% of Plans	# of Plans	% of Plans	# of Plans	% of Plans
SR < 0.60	13	1.8%	37	7.3%	20	2.4%	15	1.8%
0.60 ≤ SR < 0.80	125	17.7%	267	53.0%	344	40.5%	257	31.5%
Sub-Total < 0.8	138	19.5%	304	60.3%	364	42.9%	272	33.3%
0.80 ≤ SR < 0.90	239	33.9%	97	19.2%	314	37.0%	327	40.2%
0.90 ≤ SR < 1.00	189	26.8%	51	10.1%	103	12.1%	146	18.0%
Sub-Total < 1.00	566	80.2%	452	89.6%	781	92.0%	745	91.5%
1.00 ≤ SR < 1.20	106	15.0%	39	7.7%	54	6.4%	52	6.4%
SR ≥ 1.20	34	4.8%	13	2.7%	14	1.6%	16	2.1%
Total	706	100.0%	504	100.0%	849	100.0%	813	100.0%
Median Ratio	0.89		0.77		0.81		0.84 ¹⁹	

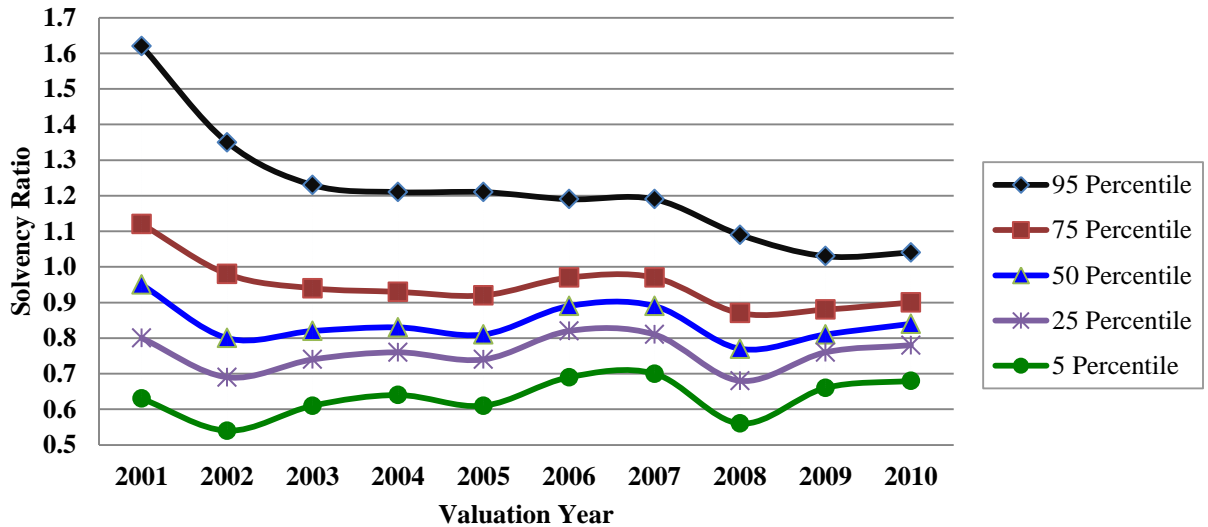
Table 4.1 above shows that the solvency ratios improved somewhat in 2009 and 2010, partially recovering from the significant decline in 2008. However, they have not recovered to the pre-2008 levels. The percentage of plans with a solvency ratio less than 0.80 decreased from 60.3% in 2008 to 33.3% in 2010. However, the proportion of underfunded plans on a solvency basis (i.e., a solvency ratio less than 1.0) is only marginally lower at 91.5% compared to last year's 92.0%.

¹⁸ The numbers of plans for 2007-2009 inclusive may differ from those reported in the 2010 Report due to (a) reports filed after last year's cutoff date of December 31, 2010, and (b) plans that have been wound up, converted to a DC arrangement, or became a Frozen DB plan with no DB/DC accruals.

¹⁹ This *median* solvency ratio pertains only to those plans that have filed a 2010 valuation. This differs from the *median* solvency ratio shown in Table 2.7 as that ratio is based on all plans included in the funding data analysis, some of which would have a valuation prior to 2010.

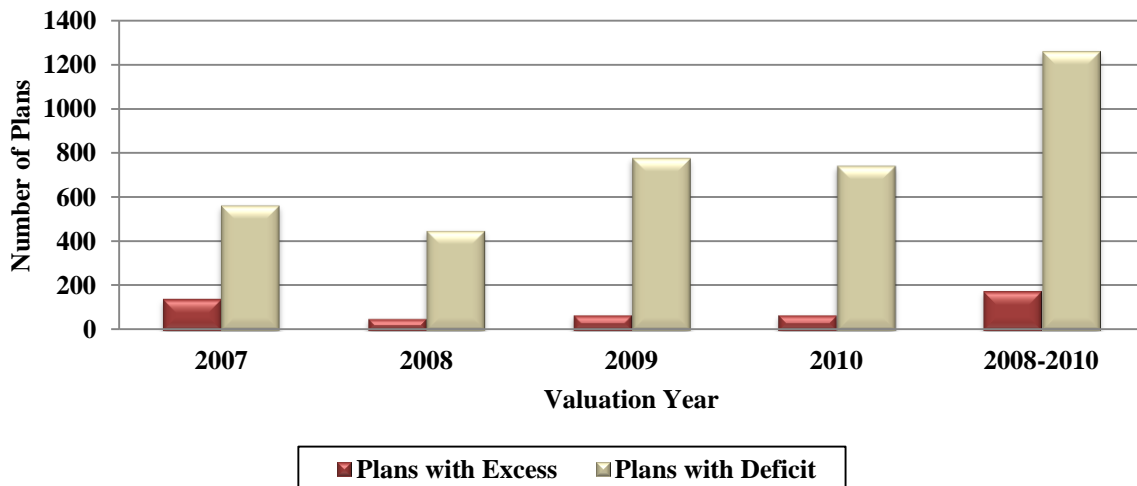
Chart 4.2 shows the distribution of solvency ratios at different percentiles from 2001 to 2010. Of note, the solvency ratios at all percentiles declined sharply from the 2007 to 2008 valuation years, but have improved since then.

Chart 4.2 - Solvency Ratios: 2001 to 2010



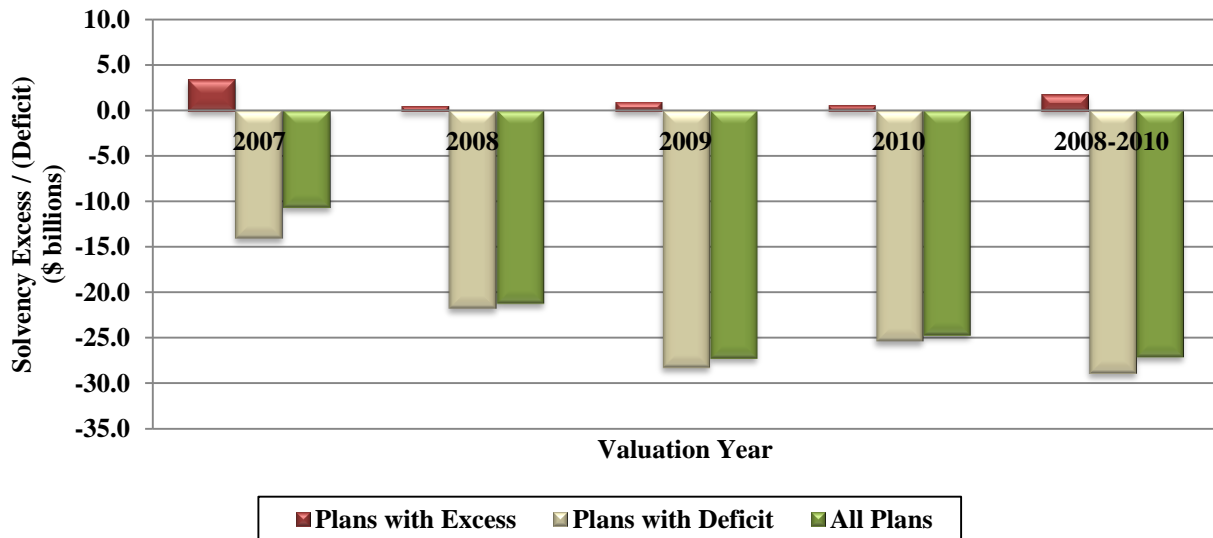
Charts 4.3 and 4.4 compare plans with a solvency excess to those with a solvency deficit for each of the four valuation years from 2007 to 2010, as well as for the three-year valuation period of 2008 to 2010.²⁰ Chart 4.3 compares the number of plans and Chart 4.4 compares the amount of solvency excess or deficit. The number of plans with solvency excesses has remained well below the number of plans with solvency deficits.

Chart 4.3 - Solvency Funding Positions of Ontario DB Plans (Number of Plans)



²⁰ Individual valuation years include those plans that filed a report with a valuation date that fell during that individual year. The 2008-10 period includes only the last funding valuation report filed for a plan with a valuation date falling between July 1, 2008 and June 30, 2011. The total number of plans included in each of the 2008, 2009 and 2010 valuation years is therefore higher than the number of plans included in the combined period 2008-2010.

Chart 4.4 - Solvency Funding Position of Ontario DB Plans (Amount of Solvency Excess / (Deficit))



On a dollar amount basis, plans that filed a report during the three valuation years (2008 to 2010) reported a *net* solvency deficit of \$27.1 billion (after allowance for expenses) on solvency liabilities of \$170.4 billion. This represents the total level of under-funding for DB plans registered in Ontario, exclusive of the seven large public sector plans and the other excluded plans previously described. In contrast, the *net* solvency deficit reported in the 2010 Report was \$26.9 billion. Under the Regulation, where a funding valuation report filed with FSCO discloses that a solvency deficiency exists, the employer is required to make special payments to eliminate the deficiency within 5 years. These rules are modified for plans that availed themselves of either the solvency relief measures, or that are being treated as SOMEPPs.

Ontario’s legislation allows certain benefits (e.g., post-retirement indexation, consent benefits, plant closure and permanent layoff benefits) to be excluded in the calculation of solvency liabilities. There were 247 plans that excluded one or more of these benefits, resulting in a reduction of liabilities totaling \$16.2 billion. Thus, the total *wind up* funding shortfall for those plans that filed a report between 2008 and 2010 would have exceeded their *net* solvency deficit by the same amount. This translates into a wind up funding deficit of \$43.3 billion (\$27.1 plus \$16.2 billion), after making allowances for expenses, on wind up liabilities of \$186.6 billion. It measures the extent of funding shortfall of all Ontario DB pension plans if they were to have wound up at their last valuation dates. Of course, this only depicts a hypothetical scenario as the majority of pension plans continue.

4.2 Actuarial Assumptions

Table 4.5 shows the interest rate assumptions used in the going concern valuations. Since 2007, there has been a clear trend to use a lower interest rate assumption. This downward trend has been reported since FSCO started publishing trend statistics.

Table 4.5 - Interest Rate Assumption by Valuation Year

Rate (%)	2007		2008		2009		2010	
	# of Plans	% of Plans	# of Plans	% of Plans	# of Plans	% of Plans	# of Plans	% of Plans
Rate < 5.00	13	1.8%	15	3.0%	23	2.7%	42	5.2%
5.00 ≤ Rate < 5.50	33	4.7%	33	6.5%	74	8.7%	119	14.6%
5.50 ≤ Rate < 6.00	86	12.2%	72	14.3%	178	21.0%	218	26.8%
6.00 ≤ Rate < 6.50	288	40.8%	196	38.9%	332	39.1%	356	43.9%
6.50 ≤ Rate < 7.00	259	36.7%	178	35.3%	235	27.7%	76	9.3%
7.00 ≤ Rate < 7.50	26	3.7%	9	1.8%	7	0.8%	2	0.2%
Rate ≥ 7.50	1	0.1%	1	0.2%	0	0.0%	0	0.0%
Total	706	100.0%	504	100.0%	849	100.0%	813	100.0%
Average (%)	6.16%		6.10%		6.01%		5.79%	

The average of the assumed interest rates declined from 6.16% to 5.79% over the four valuation years (2007 to 2010). The most prevalent assumed interest rates for all valuation years remained within the 6.00% to 6.49% range. However, there has been a significant decrease in the number of plans using rates between 6.5% and 7.0% and a corresponding increase in the number of plans using rates lower than 6.5%.

The proportion of plans using an interest rate assumption of 6.5% or higher has decreased each year, from 40.5% of plans in 2007 to 9.5% in 2010. Of the 2010 valuations filed, 98.3% of them used an assumed interest rate at or below 6.50%.

Table 4.6 shows the distribution of the mortality tables used in going concern valuations. In the 2010 valuation year, all plans used a mortality table with a base year of 1994 or later, i.e., the 1994 tables (GAM, GAR, UP).²¹

Table 4.6 - Mortality Assumption by Valuation Year

Mortality Assumption	2007		2008		2009		2010	
	# of Plans	% of Plans	# of Plans	% of Plans	# of Plans	% of Plans	# of Plans	% of Plans
1983 GAM	7	1.0%	4	0.8%	0	0.0%	0	0.0%
1994 GAM static	12	1.7%	7	1.4%	7	0.8%	8	1.0%
1994 GAR	8	1.1%	11	2.2%	8	0.9%	8	1.0%
1994 UP	656	92.9%	467	92.6%	790	93.1%	721	88.7%
Other	23	3.3%	15	3.0%	44	5.2%	76	9.3%
Total	706	100.0%	504	100.0%	849	100.0%	813	100.0%

Except for the 1994 GAR table which uses generational mortality (i.e., it includes projected mortality improvements), sufficient information was not available to identify whether projected mortality improvements had been incorporated into the mortality tables used for valuations. The necessary data to do this analysis is being collected and this information will be shown in future reports when the data becomes available.

²¹ In 2010, all plans using other mortality assumptions (76 plans) used other post-1994 mortality tables (e.g., RP2000).

5.0 INVESTMENT DATA ANALYSIS

The plans included in the investment data analysis are a subset of the 1,438 plans identified in section 2 of this report. This subset consists of plans that have filed an IIS for the most recent monitoring cycle (fiscal year ends between July 1, 2010 and June 30, 2011). There are 1,241 plans included in the investment data analysis, representing 86% of the plans included in the funding data analysis.²²

For hybrid plans, only the defined benefit assets are included in the data.

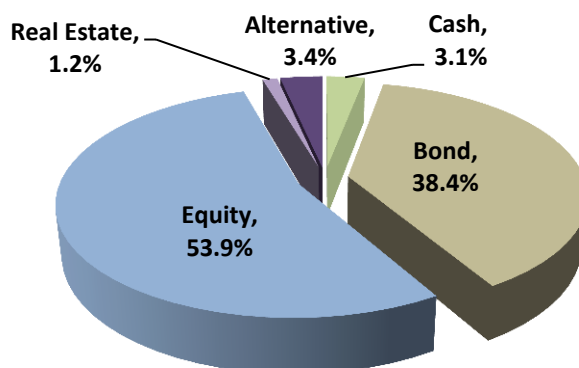
5.1 Summary of Pension Fund Profiles

The combined asset mix of the 1,241 pension funds for the most recent monitoring cycle is described in Table 5.1 and depicted in Chart 5.1.

Table 5.1 – Investment Profile of All Plans as a Whole

	Asset Class ²³	Market Value (\$ Millions)	% of Total Investments
Asset Mix	Cash	3,862	3.1%
	Bond	48,774	38.4%
	Equity	68,463	53.9%
	Real Estate	1,500	1.2%
	Alternative Investments ²⁴	4,317	3.4%
	Total	126,918	100.0%

Chart 5.1: Asset Mix of All Plans as a Single Portfolio



On a broad basis, fixed income assets (consisting of cash and bonds) constitute 41% of total investments. Non-fixed income assets (consisting of equity, real estate and alternative investments) constitute 59% of total investments.

²² The plans that are not included in the investment data analysis subset are primarily plans with outstanding IIS filings.

²³ Plan assets invested in pooled funds totaled \$56,528 million or 44.5% of total investments. Pooled funds are included in the asset mix of all plans based on their underlying asset classes.

²⁴ Alternative Investments include hedge funds, private equity, infrastructure, currency hedging, resource properties, commodities, etc.

5.2 Summary of Fund Performance

This section provides statistics on asset mix and investment performance by various categories for the latest monitoring cycle.

The 1,241 plans included in the analysis are very diverse. To illustrate the investment results for pension plans that have different characteristics, the asset mix and performance data are presented by different plan type, benefit type, plan size, solvency ratio and percentage invested in pooled funds.

In the Asset Mix section, the weight of each asset class is shown for all plans in each subgroup and for all plans as a whole.

In the Performance section, all performance numbers are determined at the individual plan level. “Return” means the rate of return, net of all investment expenses. “Average investment fees” mean the average expenses paid from the pension plan that are related to managing the pension plan’s investments, expressed as a percentage of average assets during the reporting year.

By Plan Type

The investment profile of SEPPs and MEPPs is given below. The asset mix and average performance returns are shown in Table 5.2A, while the percentile performance returns appear in Table 5.2B.

Table 5.2A – Investment Results by Plan Type

Plan Type		SEPP	MEPP	All Plans
# of Plans		1,178	63	1,241
Asset Mix	Fixed Income	42.6%	34.5%	41.5%
	Non-Fixed Income	57.4%	65.5%	58.5%
Performance	Average Return ²⁵	9.44%	9.59%	9.45%
	Average Investment Fees	0.50%	0.42%	0.50%

²⁵ The average return in this table and those in Tables 5.3-5.6 are the arithmetic (equally-weighted) average of investment returns of the pension funds in each subgroup. The average of investment returns weighted by the sizes of all pension funds is 9.59%, compared to 9.45% on an equally-weighted basis shown in this table.

Table 5.2B – Performance Result Percentiles by Plan Type

Plan Type	SEPP	MEPP	All Plans
Investment Returns			
90 th Percentile	11.90%	11.58%	11.89%
75 th Percentile	10.70%	10.53%	10.66%
Median	9.46%	9.31%	9.45%
25 th Percentile	8.12%	8.65%	8.17%
10 th Percentile	6.81%	7.61%	6.87%
Investment Fees			
90 th Percentile	0.88%	0.60%	0.87%
75 th Percentile	0.61%	0.45%	0.60%
Median	0.42%	0.39%	0.41%
25 th Percentile	0.30%	0.32%	0.30%
10 th Percentile	0.15%	0.25%	0.15%

By Benefit Type

The investment profile of pension plans with various benefit types is provided in Table 5.3.

Table 5.3 – Investment Results by Benefit Type²⁶

Benefit Type		FAE	CAE	FB	Hybrid	All Plans
# of Plans		421	148	241	431	1,241
Asset Mix	Fixed Income	39.9%	41.0%	41.1%	43.6%	41.5%
	Non-Fixed Income	60.1%	59.0%	58.9%	56.4%	58.5%
Performance	Average Return	9.59%	9.40%	9.41%	9.36%	9.45%
	Average Investment Fees	0.51%	0.56%	0.48%	0.50%	0.50%

By Plan Size

The investment profile of pension funds of various sizes is provided in Table 5.4.

Table 5.4 – Investment Results by Plan Size

Size of Plan Assets		Small (<\$25 Million)	Medium (>\$25M, <\$250M)	Large (>\$250 Million)	All Plans
# of Plans		742	404	95	1,241
Asset Mix	Fixed Income	41.3%	41.9%	41.3%	41.5%
	Non-Fixed Income	58.7%	58.1%	58.7%	58.5%
Performance	Average Return	9.07%	10.00%	10.01%	9.45%
	Average Investment Fees	0.62%	0.36%	0.32%	0.50%

²⁶ MEPPs are included in the various benefit type categories to which they belong.

By Solvency Ratio

The investment profile of pension plans with various solvency ratios is provided in Table 5.5.

Table 5.5 – Investment Results by Solvency Ratio (SR)

Solvency Ratio (SR)		SR < 0.8	0.8≤SR<1	SR ≥ 1.0	All Plans
# of Plans		245	845	151	1,241
Asset Mix	Fixed Income	38.9%	41.5%	47.3%	41.5%
	Non-Fixed Income	61.1%	58.5%	52.7%	58.5%
Performance					
Performance	Average Return	9.39%	9.49%	9.32%	9.45%
	Average Investment Fees	0.60%	0.48%	0.47%	0.50%

By Percentages Invested in Pooled Funds

The results for plans with various percentages invested in pooled funds are provided in Table 5.6.

Table 5.6 – Investment Results by Percentage Invested in Pooled Funds

Percentage Invested in Pooled Funds		< 20%	20% to 80%	> 80%	All Plans
# of Plans		177	210	854	1,241
Asset Mix	Fixed Income	45.7%	38.4%	39.1%	41.5%
	Non-Fixed Income	54.3%	61.6%	60.9%	58.5%
Performance					
Performance	Average Return	8.96%	10.15%	9.38%	9.45%
	Average Investment Fees	0.39%	0.36%	0.57%	0.50%

5.3 Investment Observations

This section presents some key observations of the analyses set out in sections 5.1 and 5.2. The focus is on those findings that are both sufficiently recognizable for 2010 and commonly evident for the previous monitoring cycles. These observations are as follows:

- The typical asset mix of pension funds changed from a fixed income/non-fixed income split of 43%/57% in 2009 to a split of 41%/59% in 2010.
- As in last year's report, pension funds of MEPPs generally invested more in non-fixed income assets than SEPPs.
- There do not seem to be significant differences in asset mix, average return and average investment fees between different benefit types.
- As expected, large plans have lower investment fees than small plans.

6.0 2011 PROJECTIONS

6.1 Estimated DB Funding Contributions in 2011

Table 6.1 presents the estimated funding contributions — comprising normal costs and special payments — that are expected to be made in respect of the DB plans in 2011, including those related to defined benefit provisions under hybrid plans. The estimates are based on the information from the most recently filed funding valuation reports with valuation dates between July 1, 2008 and June 30, 2011.²⁷

Table 6.1 - Estimated DB Funding in 2011

	Plans with Solvency Excess	Plans with Solvency Deficit	All Plans
Number of Plans	173	1,265	1,438
	(\$ Millions)	(\$ Millions)	(\$ Millions)
Employer Normal Cost Contributions	353	2,975	3,328
Member Required Contributions	85	537	622
Sub-total	438	3,512	3,950
Special Payments	30	4,030	4,060
Total	468	7,542	8,010

The total DB funding contributions in 2011 are estimated to be \$8.0 billion, which is slightly lower than the estimated contributions of \$8.1 billion for 2010, as set out in the 2010 Report. The decrease of \$0.1 billion consists of the following changes:

- A decrease of \$223 million in the required special payments (primarily from solvency special payments).
- An increase of \$103 million in the required employer normal cost and member contributions.

The special payments of \$4.1 billion represent 51% of the total estimated 2011 funding contributions of \$8.0 billion.

The table also provides a breakdown of the estimated funding contributions between plans that had a solvency excess and plans that had a solvency deficit. The total special payments of \$30 million for plans with a solvency excess represent 6% of the total contributions of \$0.5 billion for these plans. This compares with the total special payments of \$4.0 billion for plans with a solvency deficit, representing about 53% of the total contributions of \$7.5 billion for these plans.

²⁷ For plans where AIS reported contributions did not extend to the end of 2011, the 2011 estimated contributions were determined assuming contributions would continue at the same rate as that reported for the valuation period.

The estimated 2011 funding contributions are determined without considering the existence of a prior year credit balance or funding excess, which can be used to reduce required contributions during the valuation period. A total of \$4,440.4 million of prior year credit balances were reported for 142 plans that had a non-zero prior year credit balance.

6.2 Projected Solvency Position as at December 31, 2011

This section presents a projection of the solvency funding position of DB plans to the end of 2011. The projection reflects the impact of investment returns, changes in the solvency interest rates and mortality basis and the special payments expected to be made during 2011. The methodology and assumptions used are described below.

Methodology and Assumptions

The results reported in the last filed funding valuations (i.e., assets and liabilities) were first adjusted, where appropriate, to reflect the financial conditions as at December 31, 2010. Projections were then made to the end of 2011 based on the following assumptions:

- Sponsors would use all available funding excess and prior year credit balance, subject to any statutory restrictions, for contribution holidays.
- Sponsors would make the normal cost contributions and special payments, if required, at the statutory minimum level.
- Amounts of cash outflow would be the same as the pension amounts payable to retired members as reported in the last filed funding valuation. Plan administration costs were not reflected.

The *median* investment returns of pension funds (shown in Table 6.2) were used to project the market value of assets. The actual investment performance of individual plans was not reflected.

Table 6.2 – Median Pension Fund Returns

Year	Annual Rate of Return²⁸
2007	1.5%
2008	-15.9%
2009	16.2%
2010	10.4%
2011	1.0%

²⁸ For years 2007 to 2010, the rates are the *median* investment returns of pension funds provided in the Canadian Institute of Actuaries' A Report on Canadian Economic Statistics 1924-2010, dated April 2011. The rate for 2011 is derived from a representative weighted average of the 2011 return on the S&P/TSX index (30%), the MSCI World index (25%) and the DEX Universe Bond Index (45%). Note that the projected solvency ratio as at December 31, 2010 (shown in the 2010 Report) was determined using an annual rate of return of 9.8% for 2010.

The projected liabilities as at December 31, 2010 and December 31, 2011 were determined by extrapolating the solvency liabilities from the last valuation, and then adjusting them to reflect any changes in the solvency valuation basis, as provided in Table 6.3.

Table 6.3 – Solvency Liability Projection Basis

Valuation Date	Commuted Value Basis ²⁹	Annuity Purchase Basis ³⁰
December 31, 2010	Interest: 3.30% for 10 years, 5.00% thereafter Mortality: 1994 UP projected to 2020	Interest: 4.58% Mortality: 1994 UP projected to 2020
December 31, 2011	Interest: 2.6% for 10 years, 4.10% thereafter Mortality: 1994 UP generational	Interest: 3.31% Mortality: 1994 UP generational

Projection Results

Table 6.4 presents the distribution of solvency ratios that were reported in the last filed funding valuations and the distribution of projected solvency ratios (PSRs) derived from the projected assets and liabilities.

Table 6.4 - Distribution of Solvency Ratios

Distribution of Solvency Ratio	As at Last Filed Valuation	PSR as at December 31, 2010	PSR as at December 31, 2011
10 th percentile	74%	75%	62%
25 th percentile	80%	81%	67%
50th percentile	85%	87%	72%
75 th percentile	92%	93%	78%
90 th percentile	102%	103%	85%

As shown in Table 6.4, the *median* PSR is projected to decrease from 87% to 72% between December 31, 2010 and December 31, 2011. The decrease in the *median* PSR is the net effect of the following factors:

- Assumed pension fund returns in 2011 being lower than the solvency valuation discount rates used at December 31, 2010;
- The extent by which expected contributions made during 2011 were in excess of the increase in solvency liabilities due to benefit accruals in 2011; and
- A solvency valuation basis used to calculate the solvency liabilities as at December 31, 2011 that uses lower interest rates and lower mortality than that used as at December 31, 2010.

²⁹ The commuted value basis used for the December 31, 2010 and December 31, 2011 solvency projections in this report is based on the Canadian Institute of Actuaries' Standards of Practice – Practice-Specific Standards for Pension Plans, Section 3500 on Pension Commuted Values, dated June 2010.

³⁰ The interest rate for annuity purchase as at December 31, 2011 is derived based on the recommendation for the period September 30, 2011 to December 30, 2011, inclusive, as set out in the Canadian Institute of Actuaries' Memorandum of November 17, 2011 providing Guidance for Assumptions for Hypothetical Wind Up and Solvency Valuations Update – Effective September 30, 2011. Specifically, the rate is calculated as the December CANSIM V39062 rate plus 90 bps.

7.0 GLOSSARY

The following terms are explained for the purpose of this report:

Defined Benefit Pension Plan: In a defined benefit pension plan, the amount of the pension benefit is determined by a defined formula, usually based on years of service. There are several types of defined benefit plans, including:

- **Final Average** – the benefit is based on the member’s average earnings over the member’s last several years (typically 3 or 5) of employment and years of service.
- **Career Average** – the benefit is based on the member’s earnings over the member’s entire period of service.
- **Flat Benefit** – the benefit is based on a fixed dollar amount for each year of service.

Defined Contribution Pension Plan: In a defined contribution plan, the amount of the pension benefit is based solely on the amount contributed to the member’s individual account together with any expenses and investment returns allocated to that account.

Frozen Hybrid: Pension plans in which members have a frozen Defined Benefit entitlement, but are accruing future Defined Contribution benefits.

Funded Ratio: The funded ratio of a plan is the ratio of the plan’s assets to the plan’s liabilities.

Funding Valuation: This is a valuation of a defined benefit pension plan prepared for funding purposes. Two types of valuations are required by the PBA: a *going concern* valuation (which assumes the pension plan will continue indefinitely); and a *solvency* valuation (which assumes the plan would be fully wound up as at the effective date of the valuation). Under Ontario’s legislation, a solvency valuation may exclude the value of specified benefits (e.g., indexation, prospective benefit increases, or plant closure/layoff benefits).

Hybrid Pension Plan: A hybrid pension plan contains both defined benefit and defined contribution provisions.

Investment Return: The rate of return on the pension fund for the reporting year, net of all investment expenses.

Liability and Asset Valuation Methods: These are the actuarial methods used by actuaries to value the liabilities and assets of a pension plan.

Multi-Employer Pension Plan (MEPP): A multi-employer pension plan covers the employees of two or more employers and is specifically defined in the Pension Benefits Act. Typically, these plans provide defined benefits but the required contributions are negotiated through collective bargaining.

Smoothed Market Value: The smoothed market value is determined by using an averaging method that stabilizes short-term fluctuations in the market value of plan assets, normally calculated over a period of not more than five years.

8.0 APPENDIX – ADDITIONAL INFORMATION FOR PLANS IN FUNDING DATA ANALYSIS

This appendix provides additional details of the profile of the plans that have been included in the funding data analysis. The dataset consists of DB pension plans that have filed funding valuation reports with valuation dates between July 1, 2008 and June 30, 2011. Please refer to **Section 2.0 – Funding Data Analysis** of this report for details of how the dataset was compiled.

Table 8.1 shows a reconciliation of the 1,506 plans analyzed in the 2010 Report to the 1,438 plans analyzed in the 2011 Report.

Table 8.1 – Reconciliation of Plans from the 2010 Report to the 2011 Report

Plan Type:	Final Average	Career Average	Flat Benefit	Hybrid	Frozen Hybrid	MEPP	TOTAL
2010 Report	548	172	262	371	83	70	1,506
New plans / Spin-offs	1	1					2
Previously registered outside of Ontario				1			1
Previously excluded	2				6		8
<u>Change in Benefit Type</u>							
• FAE	(41)	1	1	27	12		0
• CAE		(13)		12	1		0
• FB			(7)	3	2	2	0
• Hybrid	5		1	(18)	12		0
Frozen DB (excluded from analysis)	(7)	(3)	(3)	(3)	(1)		(17)
Wind up (excluded from analysis)	(15)	(4)	(16)	(6)	(3)	(1)	(45)
Plan merger		(1)	(1)	(2)			(4)
Registration changed to outside of Ontario			(1)			(1)	(2)
Plans with reports outstanding *	(1)	(1)	(1)	(2)			(5)
DC conversion	(1)		(1)	(2)	(2)		(6)
2011 Report	491	152	234	381	110	70	1,438

* These are plans that were included in last year's analysis but are omitted from this year's analysis because they did not file a funding valuation report with a valuation date between July 1, 2008 and June 30, 2011. As such they are considered to have a report outstanding because of the requirement to file a report on at least a triennial basis.

Table 8.2 compares the number of plans analyzed in the current report with the plans analyzed in previous reports.

Table 8.2 – Plans Included in Current and Previous Reports by Plan/Benefit Type

Year	Final Average	Career Average	Flat Benefit	Hybrid	Frozen Hybrid	MEPP	Total
2011	491	152	234	381	110	70	1,438
2010	548	172	262	371	83	70	1,506
2009	640	197	322	310	n/a	70	1,539
2008	619	220	338	315	n/a	72	1,564
2007	663	236	362	292	n/a	79	1,632
2006	730	271	394	224	n/a	79	1,698
2005	805	293	424	127	n/a	73	1,722
2004	839	292	422	86	n/a	79	1,718

Table 8.3 shows a breakdown of the number of plans by size of plan membership.

Table 8.3 – Number of Plans by Size of Membership in Plan

Number of Members in Plan	Non-MEPP	MEPP	Total
0 – 49	261	-	261
50 – 99	207	1	208
100 – 249	306	4	310
250 – 499	232	3	235
500 – 999	151	13	164
1,000 – 4,999	173	25	198
5,000 – 9,999	24	12	36
10,000 +	14	12	26
Total	1,368	70	1,438

Table 8.4 shows a breakdown of the total members covered by size of plan membership.

Table 8.4 – Total Membership by Size of Membership in Plan

Number of Members in Plan	Non-MEPP	MEPP	Total
0 – 49	7,019	-	7,019
50 – 99	15,479	75	15,554
100 – 249	48,591	720	49,311
250 – 499	83,020	1,130	84,150
500 – 999	108,589	8,790	117,379
1,000 – 4,999	344,577	59,825	404,402
5,000 – 9,999	155,505	91,976	247,481
10,000 +	247,569	655,739	903,308
Total	1,010,349	818,255	1,828,604

Abbreviations

AIS	Actuarial Information Summary
CAE	Career Average Earnings
DB	Defined Benefit
DC	Defined Contribution
FAE	Final Average Earnings
FB	Flat Benefit
FSCO	Financial Services Commission of Ontario
FR	Funded Ratio
IIS	Investment Information summary Form 8
MEPP	Multi-Employer Pension Plan
PBA	Pension Benefits Act (Ontario)
PSR	Projected Solvency Ratio
SEPP	Single Employer Pension Plan
SR	Solvency Ratio
SOMEPP	Specified Ontario Multi-Employer Pension Plan